1. [Amended] An infrared burner assembly comprising an air aspirated nozzle, a compressor to provide air under pressure to said air aspirated nozzle, a fuel supply to supply liquid fuel at ambient pressure to said air aspirated nozzle and a metering valve interposed between said liquid fuel supply and said air aspirated nozzle, said metering valve being adjustable to increase or decrease the liquid fuel supplied to said air aspirated nozzle from said liquid fuel supply.

## REMARKS

Claim 1 has been amended to provide that the fuel used in the burner is a liquid fuel. The purpose of this amendment is to distinguish over the Hirt '020 reference cited by the Examiner. Claims 1-8 remain in this application and stand for examination. Reconsideration and reexamination are requested in view of the foregoing amendment and the comments made hereinafter.

Rejection of claim 1 for obviousness

The Examiner rejects claim 1 under 35 U.S.C. 103(a) as being obvious over Hirt United States Patent 4,292,020.

There is a fundamental difference between the Hirt '020 reference and the teachings of the present invention. First, Hirt '020 teaches a vapor control system which is intended to take place at gasoline service stations for preserving the environment. He does not teach a burner for heating purposes. Second, Hirt '020 teaches a gas or vapor as a fuel and not a liquid fuel. Hirt '020 takes vapor off the top of a fuel tank 16 (Figure 1). This vapor is combusted after entering the burner through line 27 (Figure 2).

Design considerations using gaseous fuel are totally different than the design considerations using liquid fuel. First, the mixture of the two gases (air and gas fuel) is easy as compared to mixing a liquid with a gas when combustion is

considered. So combustion considerations and efficiencies are not a principal concern of Hirt '020 since combustion takes place quite easily when two gases are mixed for combustion. This is especially true in Hirt '020 since his main burner 39 is provided with an ignition burner 44 which easily ignites the gaseous mixture. Again, Hirt '020 is not looking for combustion efficiency. He merely wants a way to dispose of unwanted vapors removed from a gasoline fuel tank.

In contradistinction, combustion efficiency plays a significant roll in the burner according to the present invention. By using an atomising nozzle wherein liquid fuel is brought into an atomised state using air under pressure which creates the necessary suction to bring the fuel into the combustion zone, combustion efficiency is enhanced and combustion intensity is controlled.

By today's amendment, claim 1 has been amended to specifically require that the fuel comprises an air-liquid mix. This amendment should patentably distinguish over the Hirt '020 teachings and reconsideration by the Examiner in this regard is requested.

Rejection of claims 2-8 for obviousness

The Examiner rejects claims 2-8 under 35 U.S.C. 103(a) as being obvious over aforementioned Hirt '020 and further in view of Hirt United States Patent 4,009,985. Hirt '020 has been discussed above and Hirt '985 teaches nothing additional to Hirt '020 which would enable one to reach the advantages of the present invention. Hirt '985 teaches similar subject matter to Hirt '020, namely gas and air mixtures to form a combustible mixture. He does not teach or suggest a liquid fuel combined with air under pressure.

Claims 2-8 are dependent from claim 1 and, for the same reasons claim 1 is deemed allowable, claims 2-8 should likewise be deemed allowable.

The remaining references are noted.

In view of the above, reconsideration is requested. Applicant requests removal of the rejections and objections and solicits allowance of claims 1-8 at an early date.

Respectfully submitted,

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